

WHAT IS CLAIMED IS:

1. A method of laying out traces on a virtual printed circuit board (PCB), comprising:

routing a first trace on the virtual PCB;

routing a second trace on the virtual PCB, the second trace causing crosstalk; and

reducing crosstalk between the first trace and the second trace by inserting a spacer between the traces.
2. The method of claim 1, wherein said reducing crosstalk between the first trace and the second trace comprises:

examining crosstalk rules; and

automatically inserting the artificial obstruct between the victim trace and the aggressor trace in accordance with the crosstalk rules.
3. The method of claim 2, wherein the crosstalk rules comprise noise thresholds.
4. The method of claim 3, wherein the noise thresholds comprise at least one of physical thresholds and electrical thresholds.
5. The method of claim 2, wherein the crosstalk rules comprise aggressor distances that specify the minimum distance that a first trace must be from a second trace.
6. The method of claim 1, additionally comprising:

modifying the first trace; and

automatically modifying the artificial obstruct to maintain a specified clearance between the first and second traces.

7. A method of creating specified clearances on a virtual printed circuit board (PCB) having nets of two or more traces, comprising:

searching the virtual PCB for victim nets, victim nets being nets having corresponding crosstalk rules; and

for a given victim net:

determining a crosstalk rule for the given victim net;

searching the PCB for aggressor nets relative to the given victim net, aggressor nets being nets that are adjacent to the given victim net and having clearances that exceed the crosstalk rule for the given victim net; and

inserting a spacer between the given victim net and a given aggressor net.

8. The method of claim 7, wherein the crosstalk rule for the given net comprises noise thresholds.
9. The method of claim 8, wherein the noise thresholds comprise at least one of physical thresholds and electrical thresholds.
10. The method of claim 7, wherein the crosstalk rule for the given net comprises aggressor distances that specify the minimum distance that an aggressor net must be from a victim net.
11. A method of maintaining clearances between traces on a printed circuit board (PCB) having a first trace and a second trace, the first and second traces being separated by a spacer that keeps a specified clearance between the first and second traces, the method comprising:
- adding a third trace to the virtual PCB, the third trace causing the first and second trace to move;

automatically moving the spacer relative to the movement of the first and the second trace, the spacer maintaining the specified clearance between the first and second traces.

12. The method of claim 11, additionally comprising automatically adjusting the spacer to fit in accordance with the modified virtual PCB.
13. A machine-readable medium having stored thereon data representing sequences of instructions, the sequences of instructions which, when executed by a processor, cause the processor to perform the following:
 - route a first trace on the virtual PCB;
 - route a second trace on the virtual PCB, the second trace causing crosstalk; and
 - reduce crosstalk between the first trace and the second trace by inserting a spacer between the traces.
14. The machine-readable medium of claim 13, wherein said reducing crosstalk between the first trace and the second trace comprises:
 - examining crosstalk rules; and
 - automatically inserting the artificial obstruct between the victim trace and the aggressor trace in accordance with the crosstalk rules.
15. The machine-readable medium of claim 14, wherein the crosstalk rules comprise noise thresholds.
16. The machine-readable medium of claim 15, wherein the noise thresholds comprise at least one of physical thresholds and electrical thresholds.
17. The machine-readable medium of claim 14, wherein the crosstalk rules comprise aggressor distances that specify the minimum distance that a first trace must be from a second trace.

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